arabic. The water-soluble polymers may be used individually or as a mixture of two or more thereof.

A solvent, which is used for coating the oxygen-isolating protective layer in the photosensitive lithographic printing plate according to the present invention, is preferably pure water, however, an alcohol, e.g., methanol or ethanol, or a ketone, e.g., acetone or methyl ethyl ketone may be used together with pure water. The concentration of the solid content in the coating solution is suitably from 1 to 20% by weight.

To the oxygen-isolating protective layer according to the present invention, known additives, for example, a surface active agent for improving coating properties or a water-soluble plasticizer for improving physical properties of the film may be further added.

Examples of the water-soluble plasticizer include propionamide, cyclohexanediol, glycerol and sorbitol. A water-soluble (meth)acrylic polymer may also be used.

The dry coating amount of oxygen-isolating protective layer is preferably in a range of from about 0.1 to about 15 g/m^2, more preferably from 1.0 to about 5.0 g/m^2.

Now, the support of photosensitive lithographic printing plate according to the present invention is described in detail below.

The aluminum support for use in the present invention, which is dimensionally stable, includes an aluminum or aluminum alloy (for example, alloy of aluminum with silicon, copper, manganese, magnesium, chromium, zinc, lead, bismuth or nickel) plate, and a plastic film or paper laminated or deposited with aluminum or aluminum alloy. The thickness of support is ordinarily from about 0.05 to about 1 mm. A composite sheet as described in JP-A-48-18327 is also used.

The aluminum support for use in the present invention is appropriately subjected to surface treatment as described below.

<Graining Treatment>

A method for the graining treatment used includes a mechanical graining method, a chemical graining method and an electrolytic graining method as described in JP-A-56-28893. Specifically, an electrochemical graining method wherein surface graining is electrochemically conducted in an electrolytic solution of hydrochloric acid or nitric acid, and a mechanical graining method, for example, a wire brush graining method wherein a surface of aluminum plate is scratching with a wire brush, a ball graining method wherein a surface of aluminum plate is grained with abrasive balls and an abrasive or a brush graining method wherein a surface of aluminum plate is grained with a

nylon brush and an abrasive may also be employed. The graining methods may be used individually or in combination of two or more thereof.

Of these methods, a surface graining method preferably used in the present invention is the electrochemical graining method wherein surface graining is electrochemically conducted in an electrolytic solution of hydrochloric acid or nitric acid. The current density suitable for use is in a range of from 100 to 400 C/dm^2. More specifically, it is preferred to perform electrolysis in an electrolytic solution containing from 0.1 to 50% of hydrochloric acid or nitric acid under the conditions of a temperature of from 20 to 100°C, a period of from one second to 30 minutes and a current density of from 100 to 400 C/dm^2.

The aluminum support subjected to the surface graining treatment is then chemically etched with an acid or an alkali. The method of using an acid as an etching agent takes time for destroying fine structures and thus, it is disadvantageous to industrially apply the method to the present invention. Such disadvantage can be overcome by using an alkali as the etching agent.

Examples of the alkali agent preferably used in the present invention include sodium hydroxide, sodium carbonate, sodium aluminate, sodium metasilicate, sodium